

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1-55 (canceled)

Claim 56 (new): A method of manufacturing a semiconductor device comprising the steps of:

planarizing an insulating film formed over a substrate having an insulating surface;  
forming electrodes on the insulating film;  
forming an insulating layer so as to cover the electrodes; and  
planarizing surfaces of the electrodes and a surface of the insulating layer so that they become flush with each other, thereby filling boundary portions between the electrodes with the insulating layer.

Claim 57 (new): The method according to claim 56, wherein mechanical polishing is performed in each of the planarizing steps.

Claim 58 (new): The method according to claim 56, wherein the insulating layer is light interruptive.

Claim 59 (new): The method according to claim 56, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 60 (new): A method of manufacturing a semiconductor device comprising the steps of:

planarizing an insulating film formed over a first substrate;

forming striped electrodes on the insulating film;

forming an insulating layer so as to cover the striped electrodes;

planarizing surfaces of the striped electrodes and a surface of the insulating layer so that they become flush with each other, thereby filling boundary portions between the striped electrodes with the insulating layer; and

forming a liquid crystal layer between the first substrate and a second transparent substrate.

Claim 61 (new): The method according to claim 60, wherein mechanical polishing is performed in each of the planarizing steps.

Claim 62 (new): The method according to claim 60, wherein the insulating layer is light interruptive.

Claim 63 (new): The method according to claim 60, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 64 (new): A method of manufacturing a semiconductor device comprising the steps of:

forming semiconductor elements over a substrate having an insulating surface;

forming an interlayer insulating film over the semiconductor elements;

planarizing the interlayer insulating film;

forming pixel electrodes that are electrically connected to the respective semiconductor elements on the interlayer insulating film;

forming an insulating layer so as to cover the pixel electrodes; and

planarizing surfaces of the pixel electrodes and a surface of the insulating layer so that they become flush with each other, thereby filling boundary portions between the pixel electrodes with the insulating layer.

Claim 65 (new): The method according to claim 64, wherein mechanical polishing is performed in each of the planarizing steps.

Claim 66 (new): The method according to claim 64, wherein the insulating layer is light interruptive.

Claim 67 (new): The method according to claim 64, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 68 (new): The method according to claim 64, wherein the semiconductor elements are thin-film transistors.

Claim 69 (new): A method of manufacturing a semiconductor device comprising the steps of:

forming semiconductor elements arranged in matrix form over a first substrate;

forming an interlayer insulating film over the semiconductor elements;

planarizing the interlayer insulating film;

forming pixel electrodes that are electrically connected to the respective semiconductor elements on the interlayer insulating film;

forming an insulating layer so as to cover the pixel electrodes;

planarizing surfaces of the pixel electrodes and a surface of the insulating layer so that they become flush with each other, thereby filling boundary portions between the pixel electrodes with the insulating layer; and

forming a liquid crystal layer between the first substrate and a second transparent substrate.

Claim 70 (new): The method according to claim 69, wherein mechanical polishing is performed in each of the planarizing steps.

Claim 71 (new): The method according to claim 69, wherein the insulating layer is light interruptive.

Claim 72 (new): The method according to claim 69, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 73 (new): The method according to claim 69, wherein the semiconductor elements are thin-film transistors.

Claim 74 (new): A method of manufacturing a semiconductor device comprising the steps of:

forming electrodes over a substrate having an insulating surface;

forming a DLC film to cover the electrodes;

forming an insulating layer on the DLC film; and

planarizing the insulating layer so that a surface of the DLC film and a surface of the insulating layer become flush with each other, thereby filling boundary portions between the electrodes with the insulating layer.

Claim 75 (new): The method according to claim 74, wherein mechanical polishing is performed in the planarizing step.

Claim 76 (new): The method according to claim 74, wherein the insulating layer is light interruptive.

Claim 77 (new): The method according to claim 74, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 78 (new): The method according to claim 74, further comprising a step of planarizing the electrodes before the step of forming the DLC film.

Claim 79 (new): The method according to claim 74, wherein the DLC film has a thickness of 10 to 50 nm.

Claim 80 (new): A method of manufacturing a semiconductor device comprising the steps of:

forming striped electrodes over a first substrate;

forming a DLC film to cover the striped electrodes;

forming an insulating layer on the DLC film;

planarizing the insulating layer so that a surface of the DLC film and a surface of the insulating layer become flush with each other, thereby filling boundary portions between the striped electrodes with the insulating layer; and

forming a liquid crystal layer between the first substrate and a second transparent substrate.

Claim 81 (new): The method according to claim 80, wherein mechanical polishing is performed in the planarizing step.

Claim 82 (new): The method according to claim 80, wherein the insulating layer is light interruptive.

Claim 83 (new): The method according to claim 80, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 84 (new): The method according to claim 80, further comprising a step of planarizing the striped electrodes before the step of forming the DLC film.

Claim 85 (new): The method according to claim 80, wherein the DLC film has a thickness of 10 to 50 nm.

Claim 86 (new): A method of manufacturing a semiconductor device comprising the steps of:

forming semiconductor elements over a substrate having an insulating surface;

forming pixel electrodes that are electrically connected to the respective semiconductor elements;

forming a DLC film to cover the pixel electrodes;

forming an insulating layer on the DLC film; and

planarizing the insulating layer so that a surface of the DLC film and a surface of the insulating layer become flush with each other, thereby filling boundary portions between the pixel electrodes with the insulating layer.

Claim 87 (new): The method according to claim 86, wherein mechanical polishing is performed in the planarizing step.

Claim 88 (new): The method according to claim 86, wherein the insulating layer is light interruptive.

Claim 89 (new): The method according to claim 86, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 90 (new): The method according to claim 86, wherein the semiconductor elements are thin-film transistors.

Claim 91 (new): The method according to claim 86, further comprising a step of planarizing the pixel electrodes before the step of forming the DLC film.

Claim 92 (new): The method according to claim 86, wherein the DLC film has a thickness of 10 to 50 nm.

Claim 93 (new): A method of manufacturing a semiconductor device comprising the steps of:

forming semiconductor elements arranged in matrix form over a substrate;

forming pixel electrodes connected to the respective semiconductor elements, with at least one interlayer insulating film interposed therebetween;

forming a DLC film to cover the pixel electrodes;

forming an insulating layer on the DLC film;



planarizing the insulating layer so that a surface of the DLC film and a surface of the insulating layer become flush with each other, thereby filling boundary portions between the pixel electrodes with the insulating layer; and

forming a liquid crystal layer over the insulating layer.

Claim 94 (new): The method according to claim 93, wherein mechanical polishing is performed in the planarizing step.

Claim 95 (new): The method according to claim 93, wherein the insulating layer is light interruptive.

Claim 96 (new): The method according to claim 93, wherein the insulating layer is an organic resin film in which at least one of a black pigment and a carbon-type material is dispersed.

Claim 97 (new): The method according to claim 93, wherein the semiconductor elements are thin-film transistors.

Claim 98 (new): The method according to claim 93, further comprising a step of planarizing the pixel electrodes before the step of forming the DLC film.

Claim 99 (new): The method according to claim 93, wherein the DLC film has a thickness of 10 to 50 nm.